

# City Council

## Special Meeting Agenda

**Tuesday, May 28, 2019  
Library Meeting Room  
951 Spruce Street  
7:00 PM**

***Note: The time frames assigned to agenda items are estimates for guidance only.  
Agenda items may be heard earlier or later than the listed time slot.***

**1. CALL TO ORDER**

7:00 – 8:30 PM

**2. DISCUSSION/DIRECTION – TRANSPORTATION MASTER PLAN PROJECT LIST**

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments

8:30 – 9:00 PM

**3. DISCUSSION/DIRECTION – BNSF/STEEL RANCH RAILROAD UNDERPASS UPDATE**

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments

9:00 – 9:15 PM

**4. DISCUSSION/DIRECTION/ACTION – BID FOR POWERLINE PEDESTRIAN HYBRID BEACON PROJECT AND CONTRACT AMENDMENT BETWEEN THE CITY OF LOUISVILLE AND SUSTAINABLE TRAFFIC SOLUTIONS FOR THE POWERLINE PEDESTRIAN HYBRID BEACON PROJECT *continued from 5/21/19***

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

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**Citizen Information**

If you wish to speak at the City Council meeting, please fill out a sign-up card and present it to the City Clerk.

Persons with disabilities planning to attend the meeting who need sign language interpretation, assisted listening systems, Braille, taped material, or special transportation, should contact the City Manager's Office at 303 335-4533. A forty-eight-hour notice is requested.

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9:15 – 9:30 PM    **5.    ADVANCED AGENDA & IDENTIFICATION OF FUTURE  
AGENDA ITEMS**

9:30 PM    **6.    ADJOURN**

**SUBJECT: DISCUSSION/DIRECTION - TRANSPORTATION MASTER PLAN  
PROJECT LIST**

**DATE: MARCH 28, 2019**

**PRESENTED BY: ROBERT ZUCCARO, PLANNING AND BUILDING SAFETY  
DIRECTOR**

**SUMMARY:**

Staff and the City's consultant, TEI, have been working to finalize the Transportation Master Plan (TMP) over the past few months. The completed TMP will bring together the information presented to City Council to date, including the summary of trend data and existing conditions, the defined TMP goals and community input, and the proposed projects, programs and policies. Together these elements will reflect the range of transportation needs in our community and the City's plans to address them.

At the meeting staff and TEI are presenting a draft Transportation Master Plan (TMP) project list for preliminary Council discussion and direction. These projects will be a part of the complete set of recommendations included in the plan. There will also be policy and program priorities, which will be incorporated into the final draft of the TMP. For the purpose of this review, the projects have been broken out into the following categories:

- *Corridor Projects:* This category includes major road improvement projects, including the conceptual design study for the Highway 42 widening project.
- *Underpasses:* These improvements are focused on creating regional connections across the higher vehicular volume road network that includes Highway 42/96<sup>th</sup> Street; South Boulder Road; McCaslin Boulevard; and Dillon road.
- *At Grade Crossings:* These improvements include crosswalks, shortening intersection crossing distances, median extensions for pedestrian refuges and pedestrian and bicycle signals (e.g. flashing beacons and hawk signals). The improvements are focused on school routes and regional corridors.
- *Multi-Use Paths:* These improvements include off-street paths and trails to enhance existing street sections and connect the existing trail network.
- *Bike Network:* These improvements include on-street bicycle improvements such as designated lanes or shoulders, signage and other markings and designation of official routes to complete connections across the City and to regional trail connections.
- *Sidewalks:* This category includes improved sidewalks or new sidewalk connections.
- *Transit:* This category includes access and stop improvements and vision for expanded service.

**SUBJECT: TRANSPORTATION MASTER PLAN PRELIMINARY PROJECT LIST****DATE: MARCH 28, 2019****PAGE 2 OF 5**

- *Downtown Connector Project:* This could be a marquee project providing a grade separated multi-modal path connection between The Rec Center/Via Appia and Downton that includes series of at grade crossing and multi-use path improvements.

Attached are maps showing the location of proposed projects for each category listed above. In addition, there is an interactive online project map at the following link with separate map layers for each category:

<https://louisvillecogov.maps.arcgis.com/apps/webappviewer/index.html?id=08783bfac2524982bfceb9af19cdbb09>

Also attached is a spreadsheet with projects listed by category. The spreadsheet includes preliminary staff ratings within each project category and an explanation of funding scenarios, which are discussed in more detail below.

*Preliminary Project Ratings:*

Staff has provided a preliminary rating for projects within each project category as a starting point for the Council discussion. This is intended as an exercise to aid in discussion is not intended to lead to final determinations on project prioritization. Staff from Planning, Public Works, Parks, Trails and Open Space, and the City Manager's Office all met to discuss each proposed project in detail, and then provided individual ratings, which were then averaged. Ratings are on a scale of 1-10, with the higher the number more closely aligning with project goals and more specific "prioritization considerations" developed by staff (see below). The Downtown Connector was not rated since it is a mix of several at grade crossing and multi-use path improvements. There are also a few projects that were added after the preliminary rating process with no rating attached.

The rating is intended to help determine the priority of each project, especially under a limited funding scenario. It should be noted that each project was rated independently, and against other projects within that category. There are some projects that when completed together, create some synergy around transportation goals or operational/capital efficiency in construction. Staff attempted to include those projects together in a scenario so that they may be completed within the same timeframe. For the final TMP, staff recommends translating the ratings to a high, medium and low scale, which can then be used for funding and capital improvement plan (CIP) prioritization discussions and budget adoption processes.

*TMP Project Goals:*

Louisville's transportation network will:

1. Operate efficiently and safely for all users

2. Be a cohesive and layered system of streets and trails for walking, biking, transit, driving, and recreation
3. Provide local and regional travel options that balance needs for Louisville residents, employees, and visitors
4. Utilize new technologies to provide safe, reliable, clean and convenient transportation choices
5. Increase mobility options and access for people of all ages, abilities and income levels
6. Provide complete streets that are inviting, enhance livability and reflect the City's small-town atmosphere
7. Support economic opportunities and businesses
8. Improve environmental and community health by reducing emissions, and supporting mode share and sustainability

**Prioritization Considerations:**

- Contributes to real or perceived safety of the system
- Potential to reduce vehicular congestion or cut through traffic
- Completes desired connection or fills noted gap within the system
- Promotes mode share by providing safe and convenient bicycle and pedestrian networks to business, employment and recreational amenities
- Balance of projects to support all modes, understanding current user demands and trends
- Contributes to first and last mile connections for transit
- Potential to reduce vehicle miles traveled and reduce emissions
- Supports and accommodates new transportation technology that improves efficiency, transportation choice and or reduced emissions
- Provides social equity and supports needs of underserved community groups
- Consistent with maintaining and enhancing community character goals, including support and enhancement of recreational opportunities, "livability" and a "small-town atmosphere"
- Provides infrastructure that supports and enhances local businesses and economic opportunities
- Support of project reflected in public engagement efforts
- Understanding of council priority and support for projects
- Relative cost benefit of project
- The existence or condition of existing infrastructure serving the same or similar purpose
- Equitable distribution of projects to all parts of the City

*TMP Funding Scenarios:*

Three funding scenarios have been included in the spreadsheet to understand what the City could accomplish depending on what funding is dedicated to TMP implementation. This is intended as an exercise to aid in discussion is not intended to lead to final determinations on project prioritization or funding options. The three scenarios outline what projects could be funded through a Current State, Expanded Investment state, and Enhanced Funding state. The scenarios show short to medium term funding over a period of 6 years. Since this is a 20-year plan, consideration can be giving to longer term funding scenarios, but for the purpose of this preliminary review we are focusing on our typical 6-year CIP cycle. The funding scenarios were derived using the following assumptions:

*Current State:* This funding scenario assumes the City will include in its budget \$1.5 million each year for 6 years. This was based on the current CIP budget plans, under which the City has provided similar funding (\$8 million over 6 years) to help support the implementation of the TMP. In addition, this reflects a similar level of investment that the City has made over the past few years for transportation improvement projects (excluding paving) such as Railroad Quiet Zones, SH 42 underpass, studies, neighborhood traffic safety, etc. This reflects funding that may or may not include some small portion of grant funding and partner agency funding.

*Expanded Investment:* This scenario includes an annual budget appropriation of \$3 million, or \$18 million over 6 years. This would most likely require an increased investment by the City (over current investment levels), and/or the possibility of significant grant or outside funding to expedite project implementation.

*Enhanced Funding:* This scenario includes an annual budget of \$5 million per year, or \$30 million over 6 years. It represents a continued City investment at the current level, and a significant investment in transportation that would likely occur through a state, regional or local ballot issue, fee, tax or other new funding source. Under this scenario, there could be the possibility of bonding to provide for an up-front investment in transportation. Staff have not conducted the payback analysis on a potential bond at this time.

*Maintenance/Operational Costs:* The maintenance costs of many projects would be minimal, but for other projects there could be increased operational costs either at the front end of the project (for engineering, project management, etc.) or for maintenance of the facility once constructed. This estimate could fluctuate over time, but represents the need for a concurrent operational investment to ensure these needs can be adequately addressed.

The City could begin to implement the TMP priorities under any of the above scenarios, however the completion of some of the large-scale projects, such as the major corridor projects, would require significant outside funding. It's assumed that SH 42 roadway/corridor projects, as well as major improvements along South Boulder Road would capture investments through CDOT, DRCOG TIP or other funding that supports projects of this level of regional significance. Largescale projects would likely include some local match funding, which could be built into any of the funding scenarios.

*Next Steps:*

Following Council review of the project list, a complete draft of the TMP will be finalized and staff will circulate the draft for public review. This will include a public open house and review by the following boards and commissions:

- Open Space Advisory Board
- Parks and Public Landscaping Advisory Board
- Recreation Advisory Board
- Sustainability Advisory Board
- Planning and Zoning Commission

*Discussion Questions:*

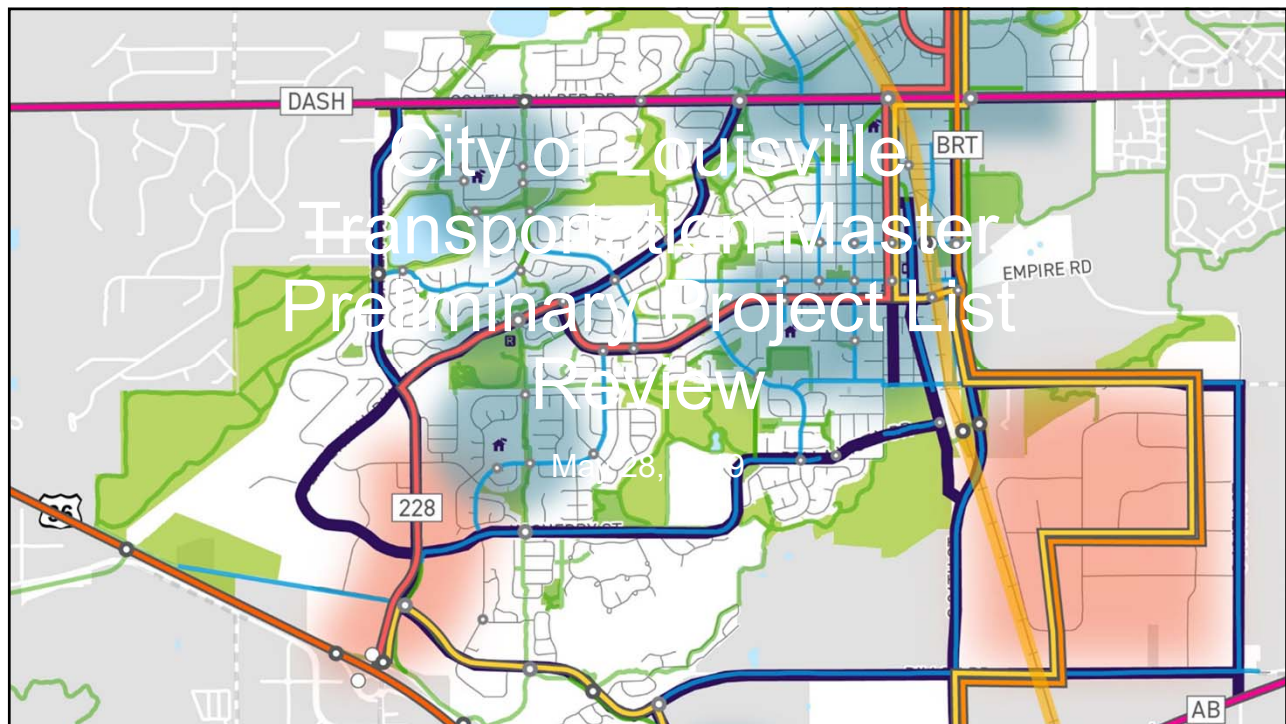
Staff is seeking feedback on the project list before we complete the TMP draft and begin the final review and adoption process. The following are some discussion questions suggested by staff:

- Does Council have feedback on any of the individual projects? Should any projects be deleted or modified in scope?
- Does Council wish to add any projects not identified?
- Is the project rating generally acceptable to Council? (Staff can provide a rating exercise for Council as a separate process or ratings can be adjusted through Council feedback at this meeting).
- Does Council have any preliminary feedback on the funding scenarios?

In addition, there are two other matters on the agenda this evening related to transportation projects that are currently in planning or underway that can be discussed along with the TMP priorities and funding considerations.

**ATTACHMENT(S):**

1. Presentation
2. Project Maps
3. Project Spreadsheet



## TMP Purpose

- Discuss key transportation trends and the City's existing transportation system
- Provide recommendations on Projects, Policies and Programs to improve our system to meet future needs



# TMP Goals

Louisville's transportation network will:



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## Review of Preliminary Project List

- Corridor Projects
- Underpasses
- At Grade Crossings
- Multi-Use Paths
- Bike Network
- Sidewalks
- Downtown Connector
- Transit

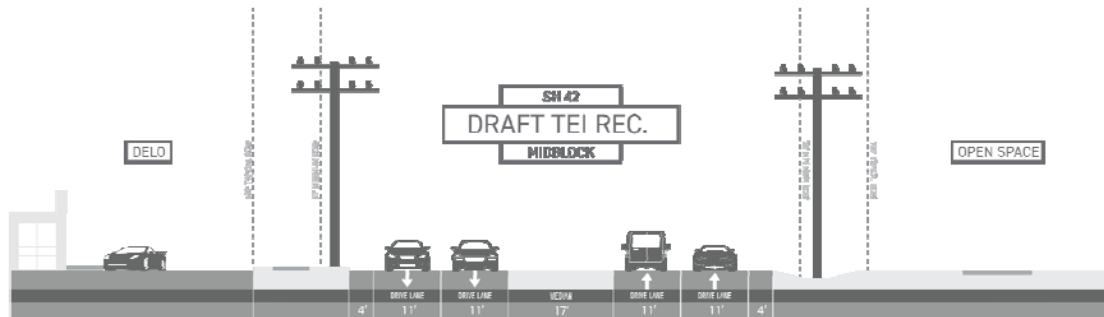
---Prioritization & Funding



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## Corridor Projects

- Major road improvement projects such as Highway 42 Widening Project



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## Underpasses

- Complete regional connections across high volume roadways (focus on South Boulder Road, Highway 42/96<sup>th</sup> Street, Dillon Road and McCaslin Boulevard).

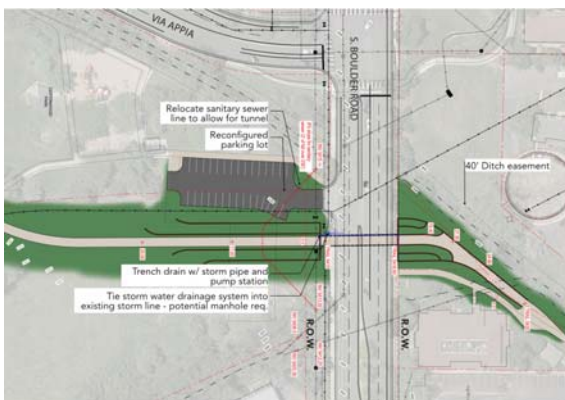


FIGURE 3: 3D AERIAL VIEW OF MAIN STREET UNDERCROSSING LOOKING WEST

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## At Grade Crossings

- *Includes crosswalks, shortening intersection distances, pedestrian refuges, pedestrian and bicycle signals. Focus on school routes and regional connections.*



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## Multi-Use Paths

- *Includes off-street paths and trails to complete and enhance connections to existing network.*



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## Sidewalks

- *Includes improved or new sidewalk connections*



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## Transit

- *Includes access and stop improvements and vision for expanded services*



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# Downtown Connector

- *Signature project to create enhanced grade separated connection to Downtown.*



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## Project Ratings and Prioritization

### Prioritization Considerations

- Contributes to real or perceived safety of the system
- Potential to reduce vehicular congestion or cut through traffic
- Completes desired connection or fills noted gap within the system
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- Contributes to first and last mile connections for transit
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- Relative cost benefit of project
- The existence or condition of existing infrastructure serving the same or similar purpose
- Equitable distribution of projects to all parts of the City

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# Project Ratings and Prioritization

Map#	Description	Location	Price	Notes	Rank
Corridor Projects					
CP1	Roadway Improvement	SH 42 Conceptual Design	\$75,000	\$500,000 total cost, \$350,000 TIP and \$75,000 Lafayette contribution	8.2
CP3	Roadway Improvement	Dillon Road	\$1,000,000	88th to 104th bike and applicable ada paint/signage. For EB and WB queue lanes around BNSF widen to increase capacity. Widen Dillon WB at 96th on the north side to provide extra queue length. additional pavement markings and signing be installed to strengthen awareness of cyclists.	8.0
CP2	Roadway Improvement	SH 42 Widening	\$25,000,000	Rebuild Empire to South Boulder Road	7.0
CP6	South Boulder Rd Study	SBR Corridor	\$100,000		5.5
CP5	Roadway Improvement	Campus Drive Extension and Widen 88th	\$9,400,000	Includes 1 new signal, may be developer funded	5.4
CP4	Roadway Improvement	Via Appia Way	\$253,440	Reduce lane widths and extend bike lanes, take out right turn lanes (costs in downtown connector), extend refuges	5.3
CP7	CTC Connector	Arthur to 96th	\$ 2,000,000		4.6

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## Funding Scenarios

- *Short to medium term scenarios (1-6 years) – does not consider long-term funding options*

Current State		Expanded Investment		Enhanced Funding	
Captial, Partner and Grant Funding		Captial, Partner and Grant Funding		Captial, Partner,Grant Funding and Additional Tax Revenue	
6yr Budget	\$9,000,000	6yr Budget	\$18,000,000	6yr Budget	\$30,000,000
Annual Budget	\$1,500,000	Annual Budget	\$3,000,000	Annual Budget	\$5,000,000
Maintenance	\$414,743	Maintenance	\$830,603	Maintenance	\$1,261,083
Tot. Spent	\$8,294,857	Tot. Spent	\$16,612,057	Tot. Spent	\$25,221,657
Net	\$290,400	Net	\$557,340	Net	\$3,517,260

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## Key Policies

- Complete/Great Streets policy with design standards
- Multimodal network guidelines for development
- Development policy to leverage investment around transit stations and/or trails
- Technology and shared mobility guidelines
- Shared parking and flexibility



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## Key Programs

- Neighborhood Traffic Management Program
- Open Streets events
- Education programs (drivers and bicyclists)
- Data collection
- Online tools/apps/maps
- Safe Routes to...Schools, Transit, Seniors
  - Fun Routes to Schools



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## Next Steps

- Complete Draft TMP for Public Review
- Board and Commission Review
- Public Open House
- Adoption Meetings



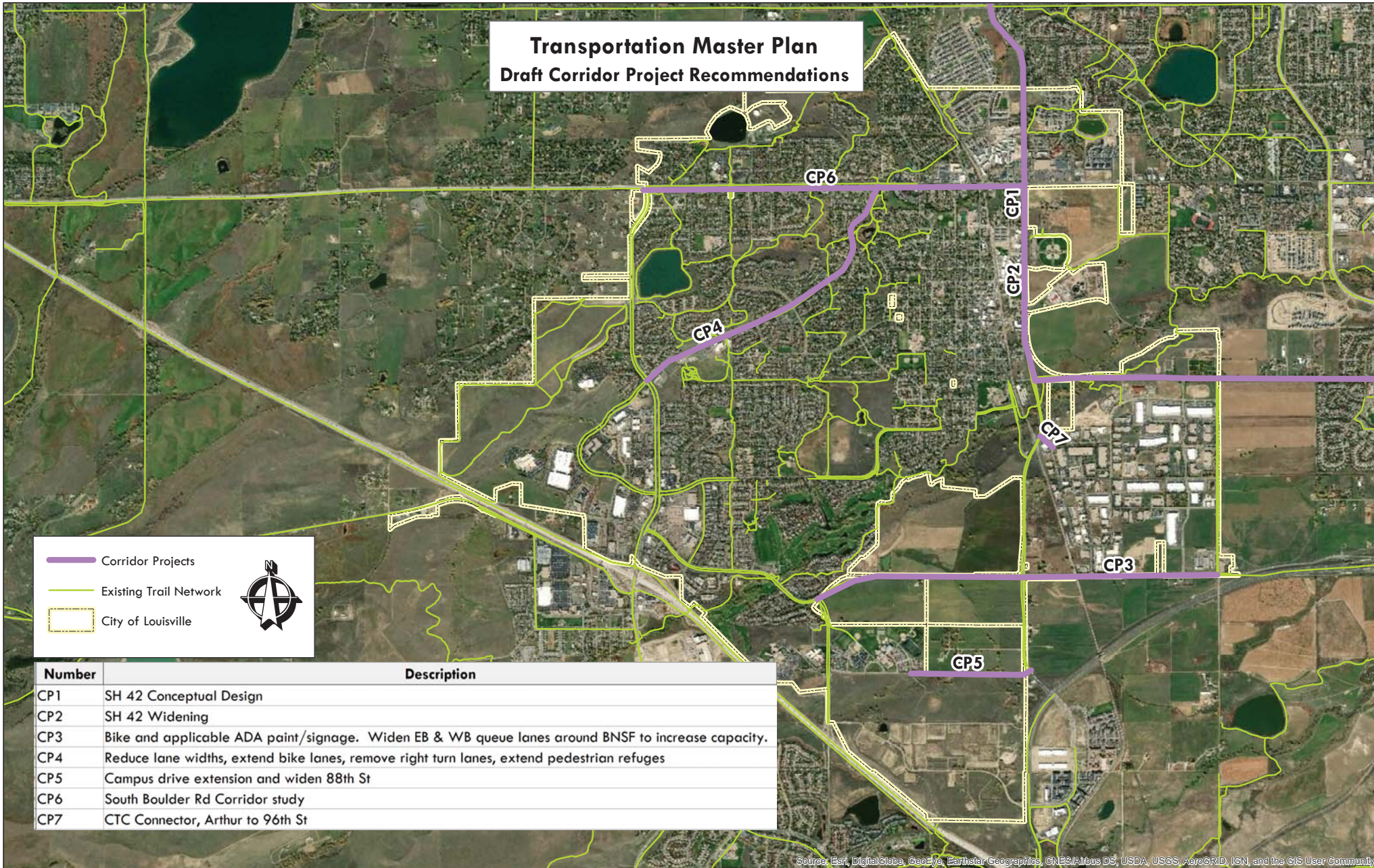
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## Questions:

- Does Council have feedback on any of the individual projects? Should any projects be deleted or modified in scope?
- Does Council wish to add any projects not identified?
- Is the project rating generally acceptable to Council? (Staff can provide a rating exercise for Council as a separate process or ratings can be adjusted through Council feedback at this meeting).
- Does Council have any preliminary feedback on the funding scenarios?
- Other feedback or questions?

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## Transportation Master Plan Draft Corridor Project Recommendations



## Transportation Master Plan Draft Underpass Recommendations

- ◆ Existing Underpass
- ◆ Planned Underpass
- ◆ Recommended Underpass
- Existing Trail Network
- City of Louisville



Number	Description
GS1	Underpass at South Boulder Rd and Main
GS2	Underpass at SH 42 and South
GS5	Underpass at SBR at SH42
GS6	Underpass at SBR at Via Appia
GS7	Underpass at Dillon at 88th
GS8	Underpass at Dillon at McCaslin
GS10	Overlook underpass

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Transportation Master Plan Draft At Grade Crossing Recommendations

- Planned At Grade Crossing
- SBR At Grade Crossings
- At Grade Crossings
- Existing Trail Network
- City of Louisville

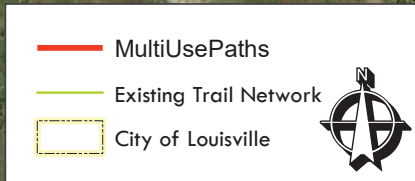


Number	Description
AG 1	Shortened crossing distance
AG 2	Shortened crossing distance
AG 3	Enhanced crossing or raised crosswalk
AG 4	Enhanced crossing or raised crosswalk
AG 5	Realign connection, enhanced crossing
AG 8	Flashing beacon
AG 9	Flashing beacon
AG10	Enhanced crossing and/or loop detention, additional signage
AG11	Enhanced crossing and/or raised crosswalk
AG12	Improve signage and striping
AG13	Enhanced crossing
AG14	Enhanced crossing and/or beacon. Monitor with additional development
AG15	Flashing beacon
AG17	Shortened crossing distance
AG18	Enhanced crossing
AG19	Upgrade beacon and advanced warning signage and striping, or hawk
AG20	Raised crossing with pedestrian refuge
AG21	All-way stop
AG22	All-way stop
AG23	Enhanced crossing
AG 24	Hawk connecting Powerline Trail to Coal Creek Trail

Number	Description
SBR1	Flashing beacon, crosswalk
SBR2	Signal, turn lane, curb and crosswalk
SBR3	Signal, turn lane, median and crosswalk
SBR4	Signal, curb, median, and crosswalk
SBR5	Signal, turn lane, crosswalk, curb and median extension

Map data: Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


## Transportation Master Plan Draft Multi-Use Path Recommendations





Number	Description
MU1	SH 42 to CTC
MU2	SH42 N of South Boulder Rd
MU3	N of South Boulder Rd E of SH42
MU4	Lock St to Community Park
MU5	Griffith St
MU6	LMS Connection
MU7	Warembourg N/S Trail
MU8	St Andrews to 88th Underpass
MU9	88th to US 36
MU10	McKinley Park
MU11	Arboretum Trail
MU15	Washington Ave
MU13	US36 to Dyer Connection
MU14	McCasin Blvd
MU17	104th regional connection
MU19	Dillon to Coal Creek East of 96th
MU16	St. Andrews (Coal Creek Bypass) to Dillon
MU20	US36 to St. Andrews
MU12	Powerline to Mining connection


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# **Transportation Master Plan** **Draft Bicycle Network Recommendations**

 BikeNetwork

 Existing Trail Network

 City of Louisville



Number	Description
BK1	Bike lane
BK2	Shoulder improvement
BK3	Bike route
BK5	Bike route
BK6	Bike route
BK7	Bike route
BK8	Bike route
BK9	Bike route
BK10	Bike route
BK13	Bike route
BK14	Bike route
BK16	Bike route
BK17	Fun route to school
BK18	Bike route
BK15	Bike route
BK4	Bike route

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

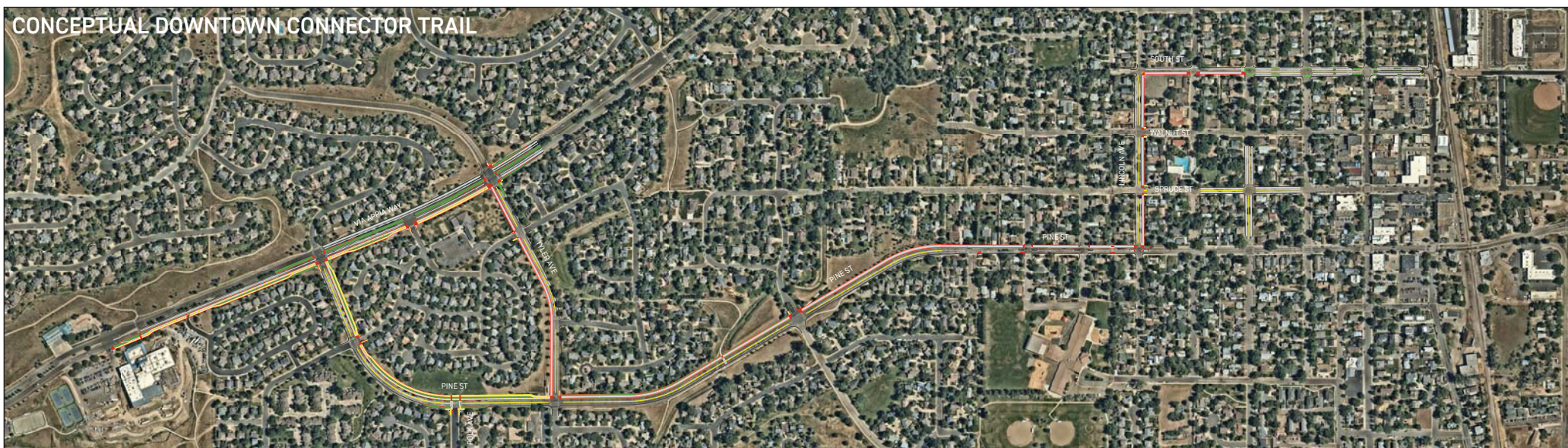
## Transportation Master Plan Draft Sidewalk Recommendations

- Sidewalks
- Existing Trail Network
- City of Louisville



Number	Description
SW2	New sidewalk on east side of Via Appia, or build bridge and new sidewalk in the park
SW5	Both sides of Pine
SW6	Both sides of Griffith
SW8	Upgrade Sidewalk North of Clementine - East or West Side
SW1	Widen Sidewalk to 10'
SW7	New Sidewalk Connecting Pine to Lee

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



						Current State		Expanded Investment		Enhanced Funding	
						Captial, Partner and Grant Funding		Captial, Partner and Grant Funding		Captial, Partner,Grant Funding and Additional Tax Revenue	
						6yr Budget	\$9,000,000	6yr Budget	\$18,000,000	6yr Budget	\$30,000,000
						Annual Budget	\$1,500,000	Annual Budget	\$3,000,000	Annual Budget	\$5,000,000
						Maintenance	\$414,743	Maintenance	\$830,603	Maintenance	\$1,261,083
						Tot. Spent	\$8,294,857	Tot. Spent	\$16,612,057	Tot. Spent	\$25,221,657
						Net Available	\$290,400	Net Available	\$557,340	Net Available	\$3,517,260
Map#	Description	Location	Price	Notes	Rank	Include?	Subtotal	Include?	Subtotal	Include?	Subtotal
Grade-Separated Crossings											
GS2	Underpass	SH 42 @ South St	\$8,000,000		8.0		\$0		\$0	1	\$8,000,000
GS6	Underpass	South Boulder Rd @ Via Appia	\$6,000,000	Consider in Cottonwood Park Plan 2020	8.0		\$0		\$0		\$0
GS3	Underpass	Power Line Trail @ Dillon Rd	\$4,000,000		5.0		\$0		\$0		\$0
GS5	Underpass	South Boulder Rd at SH42 Regional Trail	\$8,000,000		5.0		\$0		\$0		\$0
GS1	Underpass	South Boulder Rd @ Main St	\$8,000,000		4.3		\$0		\$0		\$0
GS8	Underpass	Dillon Rd east of McCaslin Blvd	\$8,000,000		3.8		\$0		\$0		\$0
	Underpass Gateway	South Boulder Rd @ Main St	\$20,000,000	Alternative to GS1 that Include Property Acquistion and Public Plaza or Entry Features	3.3		\$0		\$0		\$0
GS10	Underpass	Overlook Underpass	\$120,000	\$1,800,000	2.7		\$0		\$0		\$0
GS7	Underpass	Dillon Rd @ S 88th St	\$5,000,000	Correlated with Dillon Road traffic/capacity improvements			\$0		\$0		\$0
Planned	Underpass	Bullhead Gulch	\$3,500,000	\$4,300,000 totlia cost			\$0		\$0		\$0
At-Grade Crossings											
SBR1-5	All SBR Improvements	South Boulder Rd @ Via Appia	\$429,983	\$1,433,276 total cost, \$1,003,293 TIP	8.1	1	\$429,983	1	\$429,983	1	\$429,983
AG19	Upgrade Beacon	Power Line Trail @ Via Appia	\$20,000	Upgrade beacon and advanced warning signage and striping	6.6	1	\$20,000	1	\$20,000	1	\$20,000
AG18	Enhanced Crossing Markings	SH 42 @ Pine St	\$1,600	Bike connection for Empire Rd shoulders, future open space trail and sports complex	6.3	1	\$1,600	1	\$1,600	1	\$1,600
AG23	Formalize Painted Bump Outs	City-Wide	\$100,000	Concrete Curb with Colored Concrete or Landscaping Inside Median. Consider Bike Passthrough	5.8	1	\$100,000	1	\$100,000	1	\$100,000
AG9	Flashing Beacon Crosswalk	Sagebrush Way @ Via Appia	\$25,000		5.6	1	\$25,000	1	\$25,000	1	\$25,000
AG3	Neckdowns or enhanced crossing	Power Line Trail @ Tamarisk St	\$10,000	Coal Creek Elementary	5.1	1	\$10,000	1	\$10,000	1	\$10,000
AG4	Neckdowns or enhanced crossing	Power Line Trail @ Willow Dr	\$10,000	Coal Creek Elementary	5.1	1	\$10,000	1	\$10,000	1	\$10,000
AG5	Neckdowns or enhanced crossing	Coyote Run @ Washington Ave	\$25,000	More direct alignment, improved curb cuts	4.8		\$0	1	\$25,000	1	\$25,000
AG10	Enhanced Crossing Markings	Coyote Run @ Via Appia	\$5,000	Trail Detection, Trail advance warning sign on hill	4.8		\$0	1	\$5,000	1	\$5,000
AG15	Flashing Beacon Crosswalk	Bella Vista Dr near Aspen Way	\$25,000		4.2		\$0	1	\$25,000	1	\$25,000
AG13	Enhanced Crossing Markings	Polk Ave @ Madison Ave	\$400	(E )	4.1		\$0	1	\$400	1	\$400
AG14	Beacon and Enhanced Crossing Markings	Dahlia St @ Ridge Pl	\$50,000	Add Beacon (E,S)	3.9		\$0	1	\$50,000	1	\$50,000
AG11	Enhanced Crossing	Power Line Trail @ Polk Ave	\$10,000	Fireside Elementary School	3.3		\$0	1	\$10,000	1	\$10,000
AG12	Improve signage/stripin g	Polk Ave @ W Dahlia Ct	\$1,000	Fireside Elementary School	3.3		\$0	1	\$1,000	1	\$1,000
AG1	Shortened Crossing Distance	Willow Dr @ Kennedy Ave	\$20,000	Coal Creek Elementary (E and S)	3.1		\$0	1	\$20,000	1	\$20,000
AG17	Shortened Crossing Distance	Hutchinson St @ Jefferson Ave	\$1,000	Louisville Elementary School, additional markings (N, S)	3.1		\$0	1	\$1,000	1	\$1,000
AG2	Shortened Crossing Distance	Alder St @ Kennedy Ave	\$10,000	Coal Creek Elementary (S)	2.6		\$0	1	\$10,000	1	\$10,000
AG20	Raised Crossing with Refuge	Main St @ Louisville MS	\$20,000			1	\$20,000	1	\$20,000	1	\$20,000
AG21	All-way Stop	Main St @ Spruce St	\$1,000			1	\$1,000	1	\$1,000	1	\$1,000
AG22	All-way Stop	Main St @ Walnut St	\$1,000			1	\$1,000	1	\$1,000	1	\$1,000
AG24	Beacon and Connection to Coal Creek	Power Line and Dillon	\$535,000				\$0		\$0		\$0
Corridor Projects											
CP1	Roadway Improvement	SH 42 Conceptual Design	\$75,000	\$500,000 total cost, \$350,000 TIP and \$75,000 Lafayette contribution	8.2	1	\$75,000	1	\$75,000	1	\$75,000
CP3	Roadway Improvement	Dillon Road	\$1,000,000	88th to 104th bike and applicable ada paint/signage. For EB and WB queue lanes around BNSF widen to increase capacity . Widen Dillon WB at 96th on the north side to provide extra queue length. additional pavement markings and signing be installed to strengthen awareness of cyclists.	8.0	1	\$1,000,000	1	\$1,000,000	1	\$1,000,000
CP2	Roadway Improvement	SH 42 Widening	\$25,000,000	Rebuild Empire to South Boulder Road	7.0		\$0	0.3	\$7,500,000	0.3	\$7,500,000
CP6	South Boulder Rd Study	SBR Corridor	\$100,000		5.5		\$0	1	\$100,000	1	\$100,000
CP5	Roadway Improvement	Campus Drive Extension and Widen 88th	\$9,400,000	Includes 1 new signal, may be developer funded	5.4		\$0		\$0		\$0
CP4	Roadway Improvement	Via Appia Way	\$253,440	Reduce lane widths and extend bike lanes, take out right turn lanes (costs in downtown connector), extend refuges	5.3	1	\$253,440	1	\$253,440	1	\$253,440
CP7	CTC Connector	Arthur to 96th	\$ 2,000,000		4.6		\$0		\$0		\$0

Downtown Connector											
DC11	Reconfigure Intersection	Via Appia @ Pine St	\$100,000			1	\$100,000	1	\$100,000	1	\$100,000
DC1	Shortened Crossing Distance	Via Appia @ Tyler Ave	\$40,000			1	\$40,000	1	\$40,000	1	\$40,000
DC10	Sign Improvmnts	Spruce St @ Main St	\$1,000	Four-way stop		1	\$1,000	1	\$1,000	1	\$1,000
DC14	Urban Trail	Tyler Ave	\$325,000			1	\$325,000	1	\$325,000	1	\$325,000
DC15	Urban Trail	Pine St	\$1,360,000			1	\$1,360,000	1	\$1,360,000	1	\$1,360,000
DC13	Urban Trail	Via Appia Way	\$600,000			1	\$600,000	1	\$600,000	1	\$600,000
DC2	Shortened Crossing Distance	Pine St @ Polk Ave	\$40,000			1	\$40,000	1	\$40,000	1	\$40,000
DC4	Shortened Crossing Distance	Pine St @ Hoover Ave	\$40,000			1	\$40,000	1	\$40,000	1	\$40,000
DC9	Enhanced Crossing Markings	South St @ Jefferson Ave	\$1,600	Re-orient stop signs		1	\$1,600	1	\$1,600	1	\$1,600
DC12	Reconfigure Intersection	South St @ Main St	\$100,000	Extra space for bike parking, transit amenities		1	\$100,000	1	\$100,000	1	\$100,000
DC3	Shortened Crossing Distance	Pine St @ Tyler Ave	\$40,000			1	\$40,000	1	\$40,000	1	\$40,000
DC17	Urban Trail	South St	\$51,000			1	\$51,000	1	\$51,000	1	\$51,000
DC8	Enhanced Crossing Markings	Lincoln Ave @ South St	\$1,600			1	\$1,600	1	\$1,600	1	\$1,600
DC7	Enhanced Crossing Markings	Pine St @ Lincoln Ave	\$1,600			1	\$1,600	1	\$1,600	1	\$1,600
DC5	Enhanced Crossing Markings	Pine St @ McKinney Ave	\$25,000			1	\$25,000	1	\$25,000	1	\$25,000
DC6	Enhanced Crossing Markings	Pine St @ Garfield Ave	\$25,000			1	\$25,000	1	\$25,000	1	\$25,000
Bike Network Improvements											
BK2	Bike Shoulder Improvements	Empire Rd	\$201,600		7.6	1	\$201,600	1	\$201,600	1	\$201,600
BK3	Bike Route	W Dyer Rd	\$5,240		6.8	1	\$5,240	1	\$5,240	1	\$5,240
BK6	Bike Route	Garfield/Lincoln & Centennial Dr	\$12,960		6.4	1	\$12,960	1	\$12,960	1	\$12,960
BK17	Fun Route	Fireside-Rec Center	\$150,000		6.3	1	\$150,000	1	\$150,000	1	\$150,000
BK1	Bike Lane	Bella Vista	\$33,000	Missing segment	5.4	1	\$33,000	1	\$33,000	1	\$33,000
BK8	Bike Route	Spruce St	\$8,320	Change Stop Sign Orientation	5.4	1	\$8,320	1	\$8,320	1	\$8,320
BK16	Bike Route	Polk Ave	\$10,200		5.1	1	\$10,200	1		1	
BK10	Bike Route	Front St	\$8,300		5.1	1	\$8,300	1	\$8,300	1	\$8,300
BK9	Bike Route	Jefferson Ave	\$8,000		5.0	1	\$8,000	1	\$8,000	1	\$8,000
BK15	Bike Route	Hoover Ave	\$10,120		5.0	1	\$10,120	1	\$10,120	1	\$10,120
BK18	Bike Route	Centennial North of SBR	\$5,680		5.0	1	\$5,680	1	\$5,680	1	\$5,680
BK4	Bike Route	Washington Ave	\$12,360		4.9		\$12,360	1	\$12,360	1	\$12,360
BK5	Bike Route	Tyler Ave	\$3,240		4.9		\$3,240	1	\$3,240	1	\$3,240
BK7	Bike Route	McKinley Ave	\$640		4.8		\$640	1	\$640	1	\$640
BK13	Bike Route	Helca Dr	\$2,600		4.8		\$2,600	1	\$2,600	1	\$2,600
BK12	Bike Route	DELO to Community Park	\$11,720		4.7		\$11,720	1	\$11,720	1	\$11,720
BK14	Bike Route	Rex/West St	\$5,320		4.7		\$5,320	1	\$5,320	1	\$5,320
Sidewalk Improvements											
SW5	Sidewalk Improvement	Pine St at Rail	\$7,600	New sidewalk both sides	9.0	1	\$7,600	1	\$7,600	1	\$7,600
SW6	Sidewalk Improvement	Griffith St @ Rail	\$14,600	New sidewalk, rail crossing, south side	8.8	1	\$14,600	1	\$14,600	1	\$14,600
SW2	Sidewalk Improvement	Via Appia near Cottonwood Park	\$36,000	Alternative: Build bridge to sidewalk within park	8.1	1	\$36,000	1	\$36,000	1	\$36,000
SW1	Sidewalk Improvement	South Boulder Rd [Garfield,Jefferson]	\$81,000	Widen sidewalk to 10', where possible; coordinate w underpass construction	7.8	1	\$81,000	1	\$81,000	1	\$81,000
SW7	Sidewalk Improvement	Spruce to Miners Field to Lee W of SH42	\$64,000	New wide sidewalk to provide ped and bike accesss - Expand through Miners Field	7.7	1	\$64,000	1	\$64,000	1	\$64,000
SW8	Sidewalk Improvement	East North of Clementine Sub to Pine	\$96,000	Upgrade Sidewalk to Pine - either East or West Side	6.4	1	\$96,000	1	\$96,000	1	\$96,000
Multi-Use Paths											
MU1	Off-Street Shared Path	SH 42 to CTC	\$780,000		7.8	1	\$780,000	1	\$780,000	1	\$780,000
MU9	Off-Street Shared Path	88th to US 36	\$60,000		7.7	1	\$60,000	1	\$60,000	1	\$60,000
MU13	Off-Street Shared Path	US36 to Dyer Connection	\$10,000		7.6	1	\$10,000	1	\$10,000	1	\$10,000
MU17	Off-Street Gravel Trail	104th regional connection	\$158,334	\$950,000 total cost, \$158,333 Boulder County, \$158,333 Lafayette and \$475,000 TIP	7.4	1	\$158,334	1	\$158,334	1	\$158,334
MU4	Off-Street Shared Path	Lock St to Community Park	\$20,000	New 10' trail with rail crossing	7.4	1	\$20,000	1	\$20,000	1	\$20,000
MU5	Off-Street Shared Path	Griffith St	\$56,000		7.2	1	\$56,000	1	\$56,000	1	\$56,000
MU8	Off-Street Shared Path	St Andrews to 88th Underpass	\$120,000		6.8	1	\$120,000	1	\$120,000	1	\$120,000
MU16	Off-Street Shared Path	St. Andrews (Coal Creek Bypass) to Dillon	\$92,400		6.2	1	\$92,400	1	\$92,400	1	\$92,400
MU2	Off-Street Shared Path	SH42 N of South Boulder Rd	\$100,800		6.1	1	\$100,800	1	\$100,800	1	\$100,800
MU20	Off Street Shared	US36 to St. Andrews	\$280,000		6.1	1	\$280,000	1	\$280,000	1	\$280,000
MU19	Off-Street Gravel Trail	Dillon to Coal Creek East of 96th	\$500,000		5.9	1	\$500,000	1	\$500,000	1	\$500,000
MU11	Off-Street Shared Path	Arboretum Trail	\$80,000		5.7	1	\$80,000	1	\$80,000	1	\$80,000
MU6	Off-Street Shared Path	LMS Connection	\$360,000		5.1		\$0	1	\$360,000	1	\$360,000
MU14	Off-Street Shared Path	McCaslin Blvd	\$609,600		5.0		\$0		\$0	1	\$609,600
MU3	Off-Street Shared Path	N of South Boulder Rd E of SH42	\$276,000		4.9		\$0		\$0		\$0
MU7	Off-Street Shared Path	Warembourg N/S Trail	\$145,000		4.9		\$0		\$0		\$0
MU10	Off-Street Shared Path	McKinley Park	\$60,000		4.6		\$0		\$0		\$0
MU12	Off-Street Shared Path	Powerline to Mining connection	\$30,000		4.0		\$0		\$0		\$0
MU15	Off-Street Shared	Washington Ave	104000.0	Widen sidewalk to be mixed-use trail, not add new trail	3.6		\$0		\$0		\$0
Transit											
TR6	Bus Stop Upgrades	Shelter, Bike Racks, Trash Cans, Benches ADA Upgrades	\$300,000		6.7	1	\$300,000	1	\$300,000	1	\$300,000
TR1	Circulator Plan and Pilot Project	CTC and/or McCaslin	\$250,000		6.4	1	\$250,000	1	\$250,000	1	\$250,000
TR3	Access Improvements to McCaslin Park and Ride	Multimodal Connections, Improve Bus Route for Possible Circulator	\$200,000		5.8		\$0	1	\$200,000	1	\$200,000
TR2	Ecopass	Neighborhood or Business Incentives or for City Employees	\$20,000		5.1		\$0	1	\$20,000	1	\$20,000
TR4	NW Rail Peak Hour Service		\$1,000,000		5.0		\$0		\$0		\$0
TR5	NW Rail Station Area Planning	Downtown and CTC	\$50,000		4.9		\$0		\$0		\$0

**SUBJECT: DISCUSSION/DIRECTION – BNSF/STEEL RANCH RAILROAD  
UNDERPASS UPDATE**

**DATE: MAY 28, 2019**

**PRESENTED BY: KURT KOWAR, PUBLIC WORKS DIRECTOR**

**SUMMARY:**

The City recently completed 100% design on the underpass located along the BNSF corridor at Bullhead Gulch. The project now requires the City to meet additional BNSF standards, there are newly identified utility impacts and inflation costs, all outlined in greater detail below. The original project cost estimate at 30% design was \$2,123,244.94, with the additional requirements the revised project cost is \$4,310,244.94.

- Meet New 2018 AREMA Standards (Design) - \$110,000
- BNSF Drainage Separation - \$687,000
- Meet New 2018 AREMA Standards (Construction) - \$140,000
- Bridge Cost increase - \$250,000
- Level 3 fiber line lowering - \$500,000
- BNSF Risk - \$500,000

**FISCAL IMPACT:**

The City's share of the project has increased to \$3,560,244.94. The City has budgeted \$1,283,500 in 2019 for project construction. Additional funds may be available through Urban Drainage, but not until a future funding cycle, which would delay the project. Moving forward with the project would require a significant budget adjustment of over \$2, 000,000.

**PROGRAM/SUB-PROGRAM IMPACT:**

The proposed project supports the goal of safe traveling conditions for pedestrians. The recommended contract also supports the New Trails and Trails subprogram goal of constructing the highest priority new trails and trail connections to enhance the trail system.

**RECOMMENDATION:**

Staff would like to discuss the future of the project with City Council in light of the escalated project costs, and whether there is a desire to pursue a budget amendment to address the increased cost of this project. City Council could also consider other options such as possible reroutes which staff will outline at a conceptual level on Tuesday evening. This project will also be discussed as part of the 1<sup>st</sup> agenda item and in light of the TMP priorities.

**SUBJECT: BNSF RAILROAD UNDERPASS UPDATE**

**DATE: MAY 28, 2019**

**PAGE 2 OF 2**

**ATTACHMENT(S):**

None

**SUBJECT:** DISCUSSION/DIRECTION – BID FOR THE POWERLINE PEDESTRIAN HYBRID BEACON PROJECT AND A CONTRACT AMENDMENT BETWEEN THE CITY OF LOUISVILLE AND SUSTAINABLE TRAFFIC SOLUTIONS FOR THE POWERLINE PEDESTRIAN HYBRID BEACON PROJECT *continued from 5/21/19*

**DATE:** MAY 28, 2019

**PRESENTED BY:** KURT KOWAR, PUBLIC WORKS DEPARTMENT

**SUMMARY:**

***5/28/19 City Council Update with Additional Options for Consideration***

City Council continued this item to the May 28 meeting to allow for the Transportation Master Plan discussion to occur to provide additional context for this decision. Based on that discussion staff believes there are options Council could consider related to this project and trail connection upgrades in general.

Possible Options

1. Approve the HAWK Crossing at Powerline Trail and Dillon Road as proposed. This request would be followed with a budget amendment in the amount of \$197,340.49 to cover the increase in costs and still allow staff to move forward with other planned trail connection improvements at the Coyote Run Open Space.
2. Approve HAWK crossing with available funds but provide direction to staff to remove budget amendment of \$197,340.49 and postpone Coyote Run Open Space trail connection improvements.
3. Deny HAWK Crossing and direct staff to use available funds for the Coyote Run Open Space trail connection improvements.
4. Deny HAWK Crossing and direct staff to suspend trail connection upgrades until the completion of the Transportation Master Plan.

***Original 5/21/19 City Council Information***

Staff advertised the Powerline Trail Pedestrian Hybrid Beacon construction project in April. Bids received are as follows:

	Base Bid
<b>Mountain Constructors</b>	<b>\$393,436.49</b>
Goodland Construction	\$422,440.66
Edge Contracting	\$647,265.00

**SUBJECT: POWERLINE TRAIL PEDESTRIAN HYBRID BEACON PROJECT****DATE: MAY 28, 2019****PAGE 2 OF 4**

The Public Works Department recommends approval of a contract with Mountain Constructors, Inc. per their low bid of \$393,436.49. In addition, Staff is requesting approval of 10% contingency funds in the amount of \$39,400.

The Trail Connections accounts are to fund both the Powerline Pedestrian Hybrid Beacon Project and the Coyote Run Open Space Trail and Sidewalk Project.

The original budget for the Powerline Pedestrian Hybrid Beacon Project envisioned the installation of a HAWK Signal across Dillon Road to connect to the sidewalk on the south side of the street. As design proceeded additional scope that increased the project costs included grading and additional concrete on the north side of the crossing to handle elevation differences and extending the connection across the drainage ditch and open space area to connect with Coal Creek Trail. These costs resulted in the proposed base bid that exceeds available budget by \$197,340.

The City's upcoming Transportation Master Plan (TMP) identifies Powerline Trail has a high priority North/South corridor for pedestrians and bicyclists. Completing this crossing and connection to Coal Creek Trail achieves a high priority project in the TMP.

**FISCAL IMPACT:**

Staff will be requesting a budget amendment for account number 201528-660093 in the amount of \$197,340.49 to cover costs of the Coyote Run Open Space Trail and Sidewalk Project (Coyote Run) that is programed to be constructed out of this budget in the fall of this year.

<b>Project Budget</b>	<b>Account</b>	<b>Amount</b>
2018 Carryover Trail Connections	201523-660093	\$75,310.00
2018 Carryover Trail Connections	201528-660093	\$496,700.00
<b>Total Funding</b>		<b>\$572,010.00</b>

<b>Powerline Pedestrian Hybrid Beacon Project Expenditures (This Council Communication)</b>	
2018 Consultant Contract and Contingency	\$66,726.00
Xcel Energy Agreement (Power and Lighting)	\$11,000.00
2019 Construction Contract	\$393,436.49
2019 Construction Contract Contingency	\$39,400.00
2019 Consultant Addendum	\$24,291.00
Subtotal	\$534,853.49

**SUBJECT: POWERLINE TRAIL PEDESTRIAN HYBRID BEACON PROJECT****DATE: MAY 28, 2019****PAGE 3 OF 4**

<b>Coyote Run Open Space Trail &amp; Sidewalk Project (Future Council Communication)</b>	
2018 Consultant Contract and Contingency	\$24,130.00
2019 Construction Contract and Contingency (Estimate)	\$210,367.00
Subtotal	234,497.00
<b>Total Expenditures (Estimate)</b>	<b>\$769,350.49</b>
<b>Total Overbudget</b>	<b>(\$197,340.49)</b>

**CONSULTANT ADDENDUM (\$24,291.00):**

Additional design work that was not in the original design scope includes: a complete subsurface utility investigation per the Subsurface Utility Law which went into effect in 2018 and a more extensive drainage analysis for the trail crossing of the ditch on the south side of Dillon Road. The requested funds will also cover Construction Management services including certification of the drainage structure.

**SCHEDULE:**

Construction will begin in June .The contract time is 180 calendar days with substantial completion anticipated in December of 2019.

**PROGRAM/SUB-PROGRAM IMPACT:**

The recommended contract supports the goal of safe traveling conditions for pedestrians and motorists. The recommended contract also supports the New Trails and Trails subprogram goal of constructing the highest priority new trails and trail connections to enhance the trail system.

**RECOMMENDATION:*****5/28/19 Updated Recommendation with Additional Options for Consideration***

Staff continues to recommend the award for the Powerline Trail Pedestrian Hybrid Beacon Project based on its prioritization in the TMP. Should City Council like to move forward with any of the additional options presented above, further discussion/direction is requested.

***Original 5/21/19 Recommendation***

Staff recommends City Council award the Powerline Trail Pedestrian Hybrid Beacon Project to Mountain Constructors per their bid of \$393,436.49, authorize staff to execute change orders up to \$39,400 as a 10% project contingency, and authorize the Mayor, City Manager, Public Works Director and City Clerk to sign and execute contract documents on behalf of the City.

**SUBJECT: POWERLINE TRAIL PEDESTRIAN HYBRID BEACON PROJECT**

**DATE: MAY 28, 2019**

**PAGE 4 OF 4**

Staff recommends City Council approve the contract amendment with Sustainable Traffic Solutions for \$24,291 for additional design and construction management services.

**ATTACHMENT(S):**

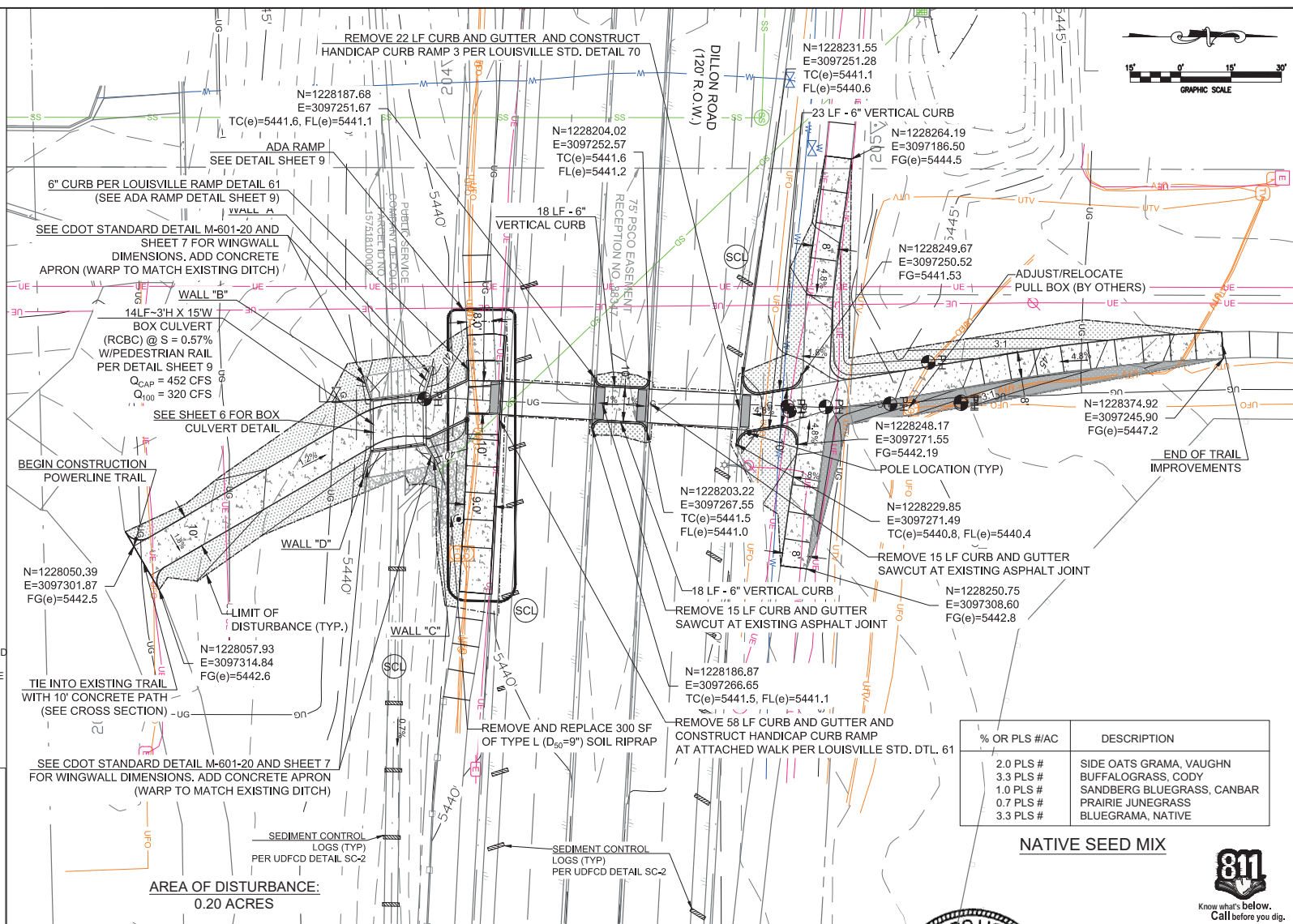
1. Powerline Pedestrian Hybrid Beacon Project Plan Sheet
2. Contractor Agreement
3. Consultant Amendment
4. Link to [March 20, 2018 Council Item Approving Design Contract for Beacon](#)

CFS = CUBIC FEET PER SECOND  
 CL = CENTERLINE  
 (e) = EXISTING (MATCH)  
 E = EASTING  
 EOC = EDGE OF CONCRETE  
 FG = FINISHED GRADE  
 FL = FLOW LINE  
 HP = HIGH POINT  
 INV = INVERT  
 LF = LINEAR FOOT  
 N = NORTHING  
 $Q_{100}$  = 100 YEAR FLOW  
 $Q_{CAP}$  = FLOW CAPACITY  
 RCBC = REINFORCED CONCRETE BOX CULVERT  
 STA = STATION

	DETECTABLE WARNING STRIP (DWS)
	6" CONCRETE WALK
	45' PROPOSED CONTOUR
	LIMIT OF DISTURBANCE
	SEDIMENT CONTROL LOG
	MANICURED LAWN
	NATIVE SEEDING
	TYPE VL RIPRAP ( $D_{50}=6"$ )
	$\frac{3}{4}"$ PEA GRAVEL
	SIGNAL POLE LOCATIONS

1. SEE SHEET 6 FOR GENERAL CONSTRUCTION NOTES.
2. GEOTECHNICAL RECOMMENDATIONS PER KUMAR AND ASSOCIATES STUDY REVISED 9/19/18.
3. LANDSCAPING SOUTH OF DILLON ROAD TO BE NATIVE SEED PER SEED MIX (THIS SHEET) MANICURED. LANDSCAPING IN MEDIAN AND NORTH OF DILLON ROAD TO BE REPLACED IN KIND AND IRRIGATION ADJUSTED AS REQUIRED.
4. CONTROL AT CURB IS AT FLOWLINE.
5. CATCH SLOPES TO MAINTAIN 3:1 MAX. SLOPE.

CITY OF LOUISVILLE:	
58	CURB & GUTTER
61	RAMP DRIVE AT ATTACHED WALK
64-66	DETECTABLE WARNING DETAIL
70	HANDICAP CURB RAMP 3
72	BIKE PATH DESIGN
GENERAL:	PEDESTRIAN HANDRAIL
	ADA RAMP
CDOT:	
M-601-20	WINGWALLS FOR BOX CULVERT (ATTACHMENT)



% OR PLS #/AC	DESCRIPTION
2.0 PLS #	SIDE OATS GRAMA, VAUGHN
3.3 PLS #	BUFFALOGRASS, CODY
1.0 PLS #	SANDBERG BLUEGRASS, CANBAR
0.7 PLS #	PRAIRIE JUNEGRASS
3.3 PLS #	BLUEGRAMA, NATIVE

NATIVE SEED MIX



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Public Works Engineering  
749 Main Street  
Louisville, CO 80027

**EUGENE LYNNE**  
2440 S. CHASE LANE, LAKEWOOD, CO 80227  
720-771-8149 - [ahildebrand@eugenelynne.com](mailto:ahildebrand@eugenelynne.com)

† Eugene Lynne

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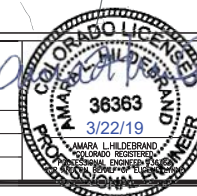
EL	SIGNATURE	DATE
DRAWN	ALH	03/20/2019
DESIGNED	ALH	03/20/2019
QC REVIEW	HEH	03/20/2019
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CADD FILE NAME		

PEDESTRIAN HYBRID BEACON DESIGN  
CITY OF LOUISVILLE

CLIENT PROJECT NO.

STS PROJECT NO.

SCALE: 1"=30'



## GRADING AND DRAINAGE DESIGN

REVISION:	SHEET NAME:	SHEET NO.
C		3

## AGREEMENT

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THIS AGREEMENT is made and entered into this 21<sup>st</sup> day of May in the year 2019 by and between:

**CITY OF LOUISVILLE, COLORADO**  
(hereinafter called **OWNER**)

and

**MOUNTAIN CONSTRUCTORS, INC.**  
(hereinafter called **CONTRACTOR**)

OWNES and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows.

### ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

**PROJECT: POWERLINE TRAIL PEDESTRIAN HYBRID BEACON**  
**PROJECT NUMBER: 201923-660093**

### ARTICLE 2. CONTRACT TIMES

- 2.1 The CONTRACTOR shall substantially complete all work by \_\_\_\_\_ and within **180 Contract Days** after the date when the Contract Time commences to run. The Work shall be completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within **200 Contract Days** after the date when the Contract Times commence to run. The Contract Times shall commence to run on the day indicated in the Notice to Proceed.
- 2.2 **LIQUIDATED DAMAGES.** The OWNER and the CONTRACTOR agree and recognize that time is of the essence in this contract and that the OWNER will suffer financial loss if the Work is not substantially complete by the date specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with the Article 12 of the General Conditions. OWNER and CONTRACTOR also agree that such damages are uncertain in amount and difficult to measure accurately. Accordingly, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the CONTRACTOR shall pay the OWNER **ONE THOUSAND DOLLARS (\$1,000)** for each and every **Contract Day** and portion thereof that expires after the time specified above for substantial completion of the Work until the same is finally complete and ready for final payment. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the OWNER from commencing an action against the CONTRACTOR for other actual harm resulting from the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance.

### **ARTICLE 3. CONTRACT PRICE**

- 3.1 The OWNER shall pay in current funds, and the CONTRACTOR agrees to accept in full payment for performance of the Work, subject to additions and deductions from extra and/or omitted work and determinations of actual quantities as provided in the Contract Documents, the Contract Price of three hundred ninety three thousand four hundred thirty six dollars and forty nine cents (\$393,436.49) as set forth in the Bid Form of the CONTRACTOR dated May 2, 2019.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

### **ARTICLE 4. PAYMENT PROCEDURES**

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

- 4.1 PROGRESS PAYMENTS. OWNER shall make progress payments on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the third Wednesday of each month during construction as provided below. All progress payments will be on the basis of the progress of the Unit Price Work based on the number of units completed as provided in the General Conditions.

- 4.1.1.1 Prior to final completion and acceptance, progress payments will be made in the amount equal to 95 percent of the calculated value of completed Work, and/or 95 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in 14.2 of the General Conditions), but in each case, less the aggregate of payments previously made and such less amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

If OWNER finds that satisfactory progress is being made in any phase of the Work, it may, in its discretion and upon written request by the CONTRACTOR, authorize final payment from the withheld percentage to the CONTRACTOR or subcontractors who have completed their work in a manner finally acceptable to the OWNER. Before any such payment may be made, the OWNER must, in an exercise of its discretion, determine that satisfactory and substantial reasons exist for the payment and there must be provided to the OWNER written approval from any surety furnishing bonds for the Work.

Nothing contained in this provision shall preclude the OWNER and CONTRACTOR from making other arrangements consistent with C.R.S. 24-91-105 prior to contract award.

- 4.2 FINAL PAYMENT. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.13 of the General Conditions.

### **ARTICLE 5. CONTRACTOR'S REPRESENTATIONS**

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- 5.1 CONTRACTOR has examined and carefully studied the Contract Documents, (including the Addenda listed in paragraph 6.10) and the other related data identified in the Bidding Documents including "technical".
- 5.2 CONTRACTOR has inspected the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 5.3 CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of the Work.
- 5.4 CONTRACTOR has carefully studied all reports of exploration and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions relating to surface or subsurface structures at or contiguous to the site (Except Underground facilities) which have been identified in the General Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to such reports, drawings or to Underground Facilities at or contiguous to the site. CONTRACTOR has conducted, obtained and carefully studied (or assume responsibility for having done so) all necessary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.
- 5.5 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.
- 5.6 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.
- 5.7 CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests studies and data with the Contract Documents.
- 5.8 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written

resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing the Work.

## **ARTICLE 6. CONTRACT DOCUMENTS**

The Contract Documents, which constitute the entire agreement between OWNER and CONTRACTOR concerning the Work, are all written documents, which define the Work and the obligations of the Contractor in performing the Work and the OWNER in providing compensation for the Work. The Contract Documents include the following:

- 6.1 Invitation to Bid.
- 6.2 Instruction to Bidders.
- 6.3 Bid Form.
- 6.4 This Agreement.
- 6.5 General Conditions.
- 6.6 Supplementary Conditions.
- 6.7 General Requirements.
- 6.8 Technical Specifications.
- 6.9 Drawings with each sheet bearing the title: PROJECT: POWERLINE TRAIL PEDESTRIAN HYBRID BEACON
- 6.10 Change Orders, Addenda and other documents which may be required or specified including:
  - 6.10.1 Addenda No. 0 to 1 exclusive
  - 6.10.2 Documentation submitted by CONTRACTOR prior to Notice of Award.
  - 6.10.3 Schedule of Subcontractors
  - 6.10.4 Anti-Collusion Affidavit
  - 6.10.5 Certification of EEO Compliance
  - 6.10.6 Notice of Award
  - 6.10.7 Performance Bond
  - 6.10.8 Labor and Material Payment Bond
  - 6.10.9 Certificates of Insurance
  - 6.10.10 Notice to Proceed
  - 6.10.11 Contractor's Proposal Request
  - 6.10.12 Contractor's Overtime Request
  - 6.10.13 Field Order
  - 6.10.14 Work Change Directive
  - 6.10.15 Change Order
  - 6.10.16 Application for Payment
  - 6.10.17 Certificate of Substantial Completion
  - 6.10.18 Claim Release
  - 6.10.19 Final Inspection Report
  - 6.10.20 Certificate of Final Completion

#### 6.10.21 Guarantee Period Inspection Report

- 6.11 The following which may be delivered or issued after the Effective Date of the Agreement and are attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.
- 6.12 In the event of conflict between the above documents, the prevailing document shall be as follows:
1. Permits from other agencies as may be required.
  2. Special Provisions and Detail Drawings.
  3. Technical Specifications and Drawings. Drawings and Technical Specifications are intended to be complementary. Anything shown or called for in one and omitted in another is binding as if called for or shown by both.
  4. Supplementary Conditions.
  5. General Conditions.
  6. City of Louisville Design and Construction Standards.
  7. Reference Specifications.

In case of conflict between prevailing references above, the one having the more stringent requirements shall govern.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

### **ARTICLE 7. MISCELLANEOUS**

- 7.1 Terms used in this Agreement, which are defined in Article 1 of the General Conditions, shall have the meanings indicated in the General Conditions.
- 7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge that assignor from any duty or responsibility under the Contract Documents.
- 7.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

**ARTICLE 8. OTHER PROVISIONS**

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR.

This Agreement will be effective on May 21, 2019.

---

**OWNER: CITY OF LOUISVILLE,  
COLORADO**

**CONTRACTOR:** \_\_\_\_\_

By: \_\_\_\_\_  
Robert P. Muckle, Mayor

By: \_\_\_\_\_

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest: \_\_\_\_\_  
\_\_\_\_\_  
Meredyth Muth, City Clerk

Attest:

Address for giving notices:

749 Main Street  
Louisville, Colorado  
80027

Attention: City Engineer

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## EXHIBIT C

### Addendum No. 3 to Service Agreement

This Addendum to that certain Services Agreement dated March 20, 2018 is made effective as of May 21, 2019, by and between the undersigned parties. The Addendum immediately preceding this Addendum was dated November 9, 2018.

1. Services to be provided: Additional Construction Management Services
2. Fees: \$24,291.00 (See Attached)
3. Schedule: Thru December 31, 2019.

CITY OF LOUISVILLE  
749 Main Street  
Louisville, CO 80027

By: \_\_\_\_\_  
Heather Balser, City Manager

Attest: \_\_\_\_\_  
Meredyth Muth, City Clerk

Company: Sustainable Traffic Solutions, Inc.

Address: 823 West 124<sup>th</sup> Drive  
Westminster, CO 80234

By: \_\_\_\_\_

Attest: \_\_\_\_\_

May 3, 2019

Ms. Joliette Woodson, PE  
Engineer III  
City of Louisville  
749 Main Street  
Louisville, CO 80027

RE: Construction Administration for the Dillon Road Pedestrian Hybrid Beacon  
City Project No. 201523 / 201528-660093

Dear Joliette,

Based on your request, STS is providing this proposal for the construction phase of the Dillon Road Pedestrian Hybrid Beacon project.

### **Scope of Services**

1. **Attend the Prebid Meeting.** STS will attend the prebid meeting that will be arranged by the City. Meeting minutes will be prepared and distributed following the meeting.
2. **Respond to Questions from Contractors.** STS will respond to questions posed by contractors prior to the bid.
3. **Review Bids.** STS will review the bids and provide a recommendation of award to the City.
4. **Attend the Preconstruction Meeting.** STS will attend the preconstruction meeting that will be arranged by the City. Meeting minutes will be prepared and distributed following the meeting.
5. **Review Contractor's Submittals.** STS will review the submittals for conformance with the plans and specifications.
6. **Meetings with the Contractor.** STS will meet with the contractor on-site on an average of once per week to review the project and to answer questions posed by the contractor. Sixteen site visits are included in the fee estimate. Meeting minutes will be prepared and distributed following each meeting.
7. **Review Pay Applications.** The pay applications provided by the contractor will be reviewed for accuracy. The fee estimate assumes that four pay applications will be reviewed.
8. **Prepare As-Built Plans.** The plans will be prepared in AutoCAD format based on drawings provided by the contractor and field observations.

## San Engineering Scope of Services

San Engineering will be a subconsultant to STS to review the construction of the box culvert. The services to be provided by San Engineering are as follows.

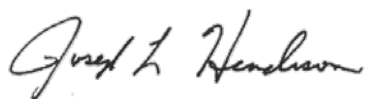
1. **Meetings with the Contractor.** San Engineering will meet with the contractor on-site a maximum of five times to review the construction of the box culvert. Notes will be provided to STS following each visit that will be included in the meeting minutes.
2. **Review of As-Built Plans for the Box Culvert.** San Engineering will review the as-built plans that will be prepared by the contractor to confirm that the box culvert was constructed in substantial conformance with the plans and specifications for the project.
3. **Certification.** San Engineering will provide a certification to the City that the box was constructed in substantial conformance to the plans and specifications for the project.
4. **Shop Drawing Review.** San Engineering will review structural shop drawings and submittals, such as reinforcing shop drawings, concrete mix designs, admixtures, etc.

## Budget

The estimated fee to administer the construction of the project is \$24,291.00. A table is attached that provides details for the construction administration charges. With this additional amount, the budget for the project is as follows.

- Original Budget           \$52,891.00
- Addendum 1               \$ 4,120.00
- Addendum 2               \$ 4,426.00
- Balance Remaining       \$ 690.53
- CM Budget                \$24,291.00
- Total Budget              \$85,728.00

Sincerely,



Joseph L. Henderson, PE, PTOE

Project Manager / Principal

Powerline Trail Signal Scope Additions 5-3-19

**Project: Dillon Road Pedestrian Hybrid Beacon Design - Construction Administration**

**Date: May 3, 2019**

Task	Task Description	Personnel						Outside Expenses	Total Cost
		Joe Henderson		Traffic Tech		Subtotal			
		\$150	/Hour	\$105	/Hour	Hours	Cost		
1	Attend the Prebid Meeting	5	\$675		\$0	5	\$675	\$15	\$690
2	Respond to Questions from Contractors	8	\$1,080		\$0	8	\$1,080		\$1,080
3	Review Bids	2	\$270		\$0	2	\$270		\$270
4	Attend the Preconstruction Meeting	5	\$675		\$0	5	\$675	\$15	\$690
5	Review Contractor's Submittals	16	\$2,160		\$0	16	\$2,160		\$2,160
6	Meeting with the Contractor	80	\$10,800		\$0	80	\$10,800	\$232	\$11,032
7	Review Pay Applications	8	\$1,080		\$0	8	\$1,080		\$1,080
8	Prepare As-Built Plans	6	\$810		\$0	6	\$810		\$810
9	San Engineering	8	\$1,080		\$0	8	\$1,080	\$5,400	\$6,480
Total		138	\$18,630	0	\$0	138	\$18,630	\$5,661	\$24,291